

REMARKS

The present application is a divisional of U.S. Serial No. 09/367,029, in which an Office action was mailed 17 July 2001, with a response time set to expire 17 October 2001. The present application is directed to a species no longer claimed in the parent application - *i.e.*, the production of a  $\beta$ -lactam.

The amendments to the claims are for clarification and for conforming to U.S. practice and to eliminate multiple dependencies, as well as to focus the invention on the production of  $\beta$ -lactams. No new matter has been added and entry of the amendment is respectfully requested.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket No. 246152012710. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: October 17, 2001

By: Kate H. Murashige  
Kate H. Murashige  
Registration No. 29,959

Morrison & Foerster LLP  
3811 Valley Centre Drive  
Suite 500  
San Diego, California 92130-2332  
Telephone: (858) 720-5112  
Facsimile: (858) 720-5125

EXHIBIT A. - VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A process for the production of a [valuable compound]  $\beta$ -lactam, comprising the steps of:

[\*] a) [fermentation of] fermenting on an industrial scale a microbial strain that produces a  $\beta$ -lactam [on an industrial scale] in a fermentation medium which is a chemically defined medium [essentially composed] consisting of chemically defined constituents, and

[\*] b) [recovery of the valuable compound] recovering the  $\beta$ -lactam from the fermentation [broth] medium.

2. (Amended) The process of claim 1, wherein the chemically defined medium further contains an [essentially small] amount of a complex carbon and/or nitrogen source which is less than 10% of the total C and/or N in the medium.

3. (Amended) The process of claim 1[ or 2], wherein the chemically defined constituents [of the chemically defined medium] comprise a carbon source selected from the group consisting of [carbohydrates such as] glucose, lactose, fructose, sucrose, a maltodextrin[s], starch [and] inulin, glycerol, a vegetable oil[s], a hydrocarbon[s], an alcohol[s such as methanol and ethanol], an organic acid[s such as acetate and higher alkanoic acids], and/or a nitrogen source selected from the group consisting of urea, ammonia, nitrate, an ammonium salt[s such as ammonium sulphate, ammonium phosphate and ammonium nitrate,] and an amino acid[s such as glutamate and lysine].

5. (Amended) The process of [any one of the claims] claim 1[ to 4], wherein [fermentation occurs] said fermenting is via a batch, a repeated batch, a fed-batch, a repeated fed-batch or a continuous fermentation process.

6. (Amended) The process of claim 5, wherein [fermentation occurs] fermenting is via a fed-batch process.

15. (Amended) The process of [any one of the claims] claim 1[ to 9], wherein the microbial strain is a filamentous microbial strain.

20. (Amended) The process of claim 19, wherein the fungus is *Penicillium chrysogenum* [ and the valuable compound is a  $\beta$ -lactam compound].